The JOURNAL *of* GEOGRAPHY

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VOLUME XXXVIII MARCH, 1939 NUMBER 3

THE "SECOND" REPUBLIC OF CZECHO-SLOVAKIA*

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During October, 1938, the Czechoslovak government was compelled to surrender the so-called Sudeten regions to the German Reich in pursuance of the dictate of Munich. During the same month Poland sent an ultimatum to Prague and its troops took over the district of Teschen and Bohumín in Silesia. During November certain portions of Slovakia and Carpathian Ruthenia were allotted to Hungary. Today it appears that the new Czechoslovak frontiers are practically settled. There will be still some minor local rectifications, but on the whole no great changes may be expected.

THE RESULTS OF THE AMPUTATIONS

According to estimates, based on the Czechoslovak census of 1930, the present-day territory of Bohemia and Moravia, reduced by 11,390 square miles, will contain 6,453,857 Czechs and 234,798 Germans. On the territory occupied by Poland, that is, in the districts of Bohumín, Frýštát, Český Těšín and Jablunkov, there were out of the total population of 230,000 some 134,000 Czechs and only 77,000 Poles, besides 17,000 Germans and some 11,000 aliens (mostly Poles). The area of Bohemia and Moravia was thus reduced to 19,053 square miles and the total population to approximately seven millions.

Slovakia has lost to Hungary a territory of 3,978 square miles inhabited by 854,217 people of whom there were 288,803 Slovaks, 587,692 Magyars, 26,181 Jews, 8,967 Germans and 1,829 Ruthenians. If we add what Slovakia has lost to Poland (85 sq. mi. with a total population of 8,043, of whom 7,652 are Czechs and Slovaks), we find that the present-day reduced Slovakia has 2,401,857 inhabi-

* The name of the present country is spelled with a hyphen—Czecho-Slovakia—in recognition of its federated character of government. The old and new spellings are used to differentiate. Differences in the spelling of names are due to differences in American and European usage. All statistics are the latest available at the time of writing but must be considered as only approximate.—EDITOR.

tants, divided into 2,055,802 Slovaks, 65,780 Magyars, 134,317 Germans, 89,187 Ruthenians, and 39,158 Jews.

Carpathian Ruthenia (Ukraine) has lost to Hungary 587 square miles with 173,233 souls, of whom 17,247 are Czechs and Slovaks, 36,735 Ruthenians, 86,681 Magyars, 4,908 Germans, and 25,883 Jews.

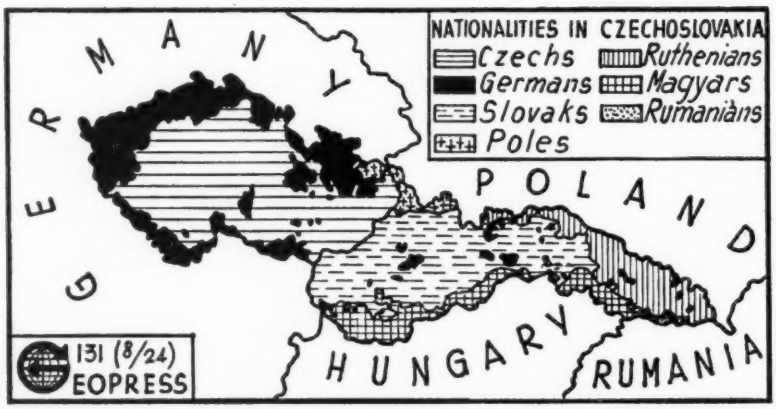

Fig. 1. The figures relating to the changes in the number of inhabitants are contained in the following table. They are based on the data of the census of December 1, 1930. According to these figures there remain in the present-day Czecho-Slovakia 9,807,096 inhabitants. In view of the natural increase in the population during the past eight years we may estimate the present population at 10,300,000. The total loss in population, according to the census of 1930, amounts to 4,922,440, or 33 per cent.

	Bohemia	Moravia	Slovakia	Ruthenia	Czecho-Slovakia
Former population	7,109,376	3,565,010	3,329,793	725,357	14,729,536
Present "	4,472,354	2,332,522	2,450,096	552,124	9,807,096
Ceded to Germany	2,637,022	1,000,704	15,566		3,653,292
" " Poland		231,784	9,914		241,698
" " Hungary			854,217	173,233	1,027,450
Total ceded	2,637,022	1,232,488	879,697	173,233	4,922,440

It should be noted, from the standpoint of "racial justice" and "self-determination," that of 2,822,899 souls ceded to Germany, 738,502 were Czecho-Slovaks; Hungary acquired 992,492 inhabitants, of whom 288,803 are Czechs and Slovaks, 25,261 Ruthenians, 13,608 Germans, and 51,578 Poles; Poland took 230,282 people, of whom only 73,303 were Poles, 134,311 Czechs and Slovaks, and 17,351 Germans.

Today the region has a total population of 552,124 people, of whom 413,481 are Ruthenians, 25,894 Magyars, 65,828 Jews, 8,715 Germans, and 17,495 Czechs and Slovaks.

The whole country will have an area of 38,180 square miles, and a little less than 9,807,096 inhabitants. The figures will be, however, augmented by the natural increase of population since 1930 and by thousands of refugees, in addition to a considerable number

of Czechs left in the occupied area who might decide to move to the new state, so that it may finally reach well over ten and a half millions. The Czechs will now count in the reconstructed state about 6,800,000, Slovaks 2,200,000, Carpatho-Russians 512,000, Germans from 370,000 to 380,000. On the other hand, in Germany alone there will be a Czech minority of some 780,000 people, and in Poland well over 130,000. The Slovak minority in Hungary will amount to 398,000 souls, assuming that in pre-Munich Hungary there had lived only 104,000 Slovaks according to the Hungarian official statistics.

THE ECONOMIC CHANGES

The cession of the Sudeten regions will create a new situation in the country's economy, industry and employment. The Sudeten

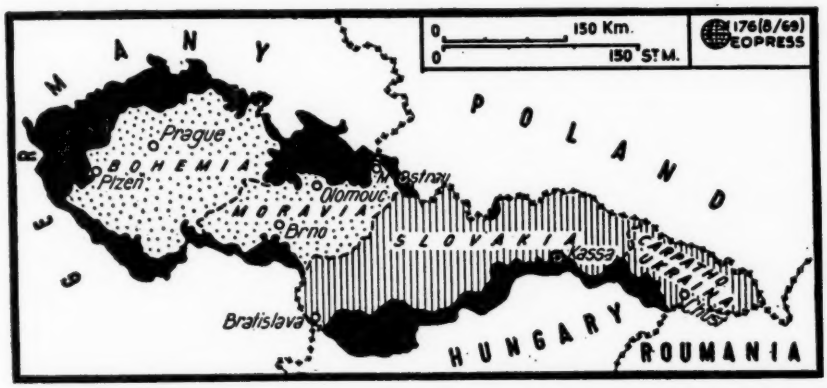

Fig. 2. Under the terms of Munich and Vienna Czecho-Slovakia has lost roughly one-third of its previous area, and one-third of its population. The area of Czecho-Slovakia is now 38,180 square miles. As regards area, Czecho-Slovakia occupied formerly the thirteenth place among the European states, now the seventeenth place. The figures relating to the changes of area are shown in the following table in square miles.

	Bohemia	Moravia	Slovakia	Ruthenia	Czecho-Slovakia
Former area	20,095	10,347	18,922	4,870	54,236
Present area	12,522	6,531	14,844	4,282	38,180
Ceded to:					
Germany	7,573	3,482	14		11,070
Poland		333	85		419
Hungary			3,978	587	4,566
Total ceded	7,573	3,815	4,077	587	16,055

region was the main centre of the textiles (cloth, gloves, stockings, laces), glass, of almost all the chinaware production, of musical instruments, toys, hardware, etc. In securing Teschen, Poland annexed rich coal and coke resources and industrial centres. All

in all, Czechoslovakia lost 59 per cent of its mining industry, 27 per cent of its steel industry, 30 per cent of its leather industry, 71 per cent of its toy industry, 66 per cent of its glass industry, 92 per cent of its porcelain industry, and about 60 per cent of its textile industry. But textiles and potteries were in considerable financial difficulty. Considerable coalfields in the Sudeten area went with them, and the world-famous spas of western Bohemia which played in years of prosperity such an important rôle in the country's tourist traffic and in its balance of payments, are now in German possession, altho the three main spa towns, Carlsbad, Marienbad, and Franzesbad have been bankrupt in recent years. But there is no complete industrial loss anywhere. The iron, textile, glass, leather, sugar and other leading branches continue to be well represented on Czecho-Slovakia's soil; moreover, in Slovakia there is a great field for the establishment of new industries, for there is abundant water power, and labor is both plentiful and cheap. In fact, the country still retains 100 per cent of its iron and manganese mines, 45.3 per cent of its hard coal, but only 3 per cent of its brown coal. There remains 70 per cent of both iron and steel production, 76 per cent of its brass mills and 64 per cent of its coke ovens. Even during the frantic days of evacuation before advancing armies, the Czechs found means of removing over 300 factories, large and small, into the interior. Thousands of fleeing Czechs from the Sudeten textile and glass factories have taken their skill with them. New glass works have already been opened in Turnov; in Železný Brod new workshops have been founded. In Praha (Prague) and Benešov new glove factories are now working.

It is of importance that the big woolen center of Brno has been retained, as well as the famous Škoda works in Plzež. The future prospects of this world famous armaments industry are attracting a good deal of attention. Škoda's main works are in Plzež, but there are also branch factories in Doudlevec, Hrádek, Junhbunzlau and Königsgratz. All these remain in the amputated state. Now that the internal demand for munitions and arms has slackened, their technical skill and high production capacity will be available for foreign orders to a much greater extent than before. The same applies to the Česko-Moravská-Kolben Company, the Brunner (Brno) Waffenfabrik, the Böhmische Waffenfabrik at Strakonice, the Janáček Company in Praha and several others. Škoda, for example, also builds motor cars and electrical and other instruments. The Česko-Moravská Company likewise manufactures mo-

torcars, boilers and machinery of various kinds. The Brunner Waffenfabrik makes typewriters, bicycles and precision instruments. The Janáček Company, in addition to machineguns, produces motorcycles and small cars. The main question is one of markets. More difficult is perhaps the position of firms making ammunition and explosives only—those of Vlašim, Rokycany and Semtín.

AGRICULTURE

The economic structure of the country, which has hitherto represented a fairly even balance between industry and agriculture, will now take on a predominantly agricultural character for the near future, altho the important forest lands of Bohemia and

Fig. 3. While in the "Second Czecho-Slovakia" Bohemia will have a large minority of Germans (99,256 in Bohemia and 135,542 in Moravia), Slovakia will have three minorities, German (134,317), Magyar (65,780), and Carpatho-Ukraine (89,187). Carpatho-Ukraine will have a large Jewish minority (65,828) and small national groups of Germans (8,715), Czechs and Slovaks (17,495), and Rumanians.

Silesia are lost (with their paper and factories) together with the fertile plains of Slovakia and Ruthenia to Hungary. It is generally thought that there will have to be an intensive development of agriculture if a living is to be found for the thousands of workers, employees and civil servants who will migrate from the ceded territories. In the eastern part of the Republic a good deal has already been done in the direction of more intensive dairy farming after the example of Austria, Denmark and Holland. Much more will have to be done along these lines, at the same time as new industries are being built up within the new frontiers.

If we take into consideration the loss of the Wheat Island in connection with other smaller and less important areas to Hungary, judged from the point of view of agriculture, together with the loss

of certain agricultural areas in Carpathian Ruthenia, the alteration of the frontiers means a serious economic loss, because 76 per cent of the tobacco growing area, 38 per cent of the maize-land, 37 per cent of the vineyards, 27 per cent of the millet producing area, and 13.8 per cent of the wheat-growing land of the whole of the original area of the Republic has passed to Hungary. There is a surplus of potatoes, and these can be used for increasing pig production, partly for fat, so as to cut down the imports of animal fats, and partly for bacon which can be exported. About 12 per cent of the sugar production has been lost, but as consumption is reduced by 30 per cent there still remains a surplus. This might be used in fruit canning for export.

Of the population which lived by agriculture and forestry, the state retains 69 per cent, and 61 per cent of its industrial workers. Never having had a sea coast, Czecho-Slovakia early in its long history developed a large fishing business in artificial ponds covering hundreds of acres of infertile soil in southern Bohemia. This vital element in its food supply has all been retained.

Communications

Probably the most serious losses have been those in regard to communications. All the main lines between Bohemia, Moravia and Slovakia have been cut and eleven towns are cut off from rail connections on all sides. The Ministry of Railways is counting on the construction of 834 miles of new track to replace the lines now intercepted by the new boundaries. One of the prominent items in the program is the construction, to begin next spring, of a motor road over 620 miles in length running from Bohemia in the west to Carpathian Ukraine in the extreme east of the Republic. It will link up with the main roads running north and south to the other parts of the country and to the neighboring countries. The work will give employment at the outset to 50,000 workers, but the number will gradually be raised to 100,000. It is hoped that this will not only relieve unemployment directly, but will do so indirectly thru the branches of industry that supply the necessary materials, machinery, etc. In view of the great length of the Republic the new transversal motor road will mean faster communications than had hitherto been possible; it will facilitate food supplies for the larger towns, open up big agricultural areas and bring more prosperity to Slovakia, and particularly to districts hitherto remote from the main lines of communication and trade. It will also give a stimulus

to tourist traffic, for it will pass thru some of the finest scenery in all Central Europe.

One of the problems which is at present occupying the attention of the government is that of finding substitutes for the river ports and depots lost by the cessions in northern Bohemia. A plan has been drawn up for the extensions of the harbors at Mělník, on the junction of the Elbe and the Vltava, and at Holešovice, on the out-

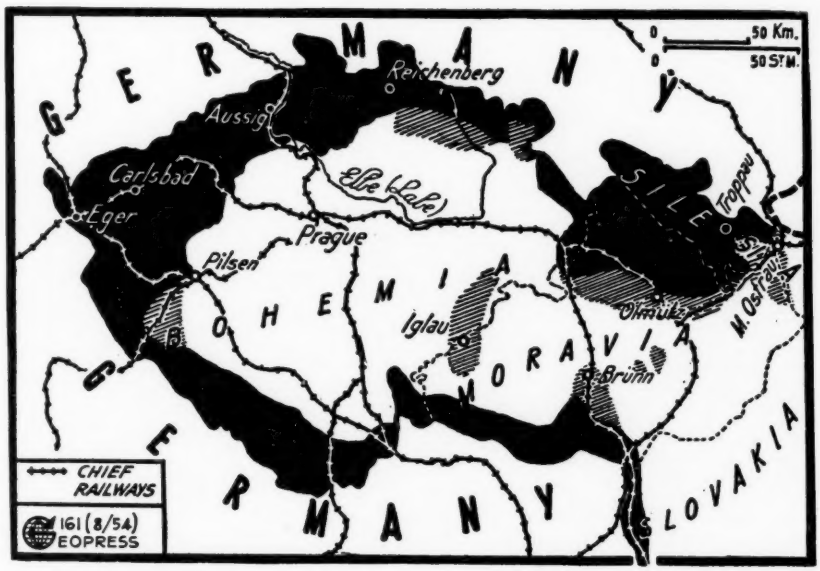

Fig. 4. In elementary industry the most appreciable losses to Germany and Poland are those of brown and black coal. Mineral wealth has been left untouched except for the less important deposits of zinc and uranium ore. Profound losses in the glass industry have occurred in the production of plate glass, bottles, optical glass, mirrors, and other forms. In spite of the losses to Poland, the basis for the huge Czecho-Slovak iron and steel trade has not experienced such losses as could limit exports in any way. Very extensive changes have taken place in the whole sector of the textile industry, and the greatest have occurred in the cotton industry.

skirts of Praha. Most important is Mělník, which has been steadily developed in the past twenty years, and is now of special significance since it is now almost on the new German frontier. Another plan which has been made is for the development of the Elbe waterway so as to make it navigable as far east as Kolín, and to build a new harbor there. It is anticipated that the scheme will be completed within five yers.

Then there is a plan for the Danube-Oder Canal, to be constructed jointly by Czecho-Slovakia and Germany. Approximately

140 miles long, it will provide direct waterway connection between the Baltic and the Black Sea of a length of some 1,740 miles. Six countries will be linked by this canal—Germany, Czecho-Slovakia, Hungary, Yugoslavia, Rumania and Bulgaria. The realization of the plan will, in effect, make two sea coasts available to the entirely land-locked Czecho-Slovakia. The new waterway will also have the effect of joining Danzig to the Black Sea, since the Oder and Vistula rivers are already joined by the canal near Bydgoszsz

Fig. 5. In Bohemia and Moravia-Silesia, the areas ceded to Germany and Poland were largely industrial, while the regions in the east ceded to Hungary were for the most part agricultural, tho comprising many important towns such as Košice, Lučenec, Užhorod, and Mukačevo. The economic structure of the Czecho-Slovak Republic as a unit with mixed agricultural and industrial production has not experienced any great change, as formerly 34.64 per cent were engaged in agriculture and 34.94 per cent in industry, while the figures are 37.60 per cent and 32.07 per cent, respectively, today. The major difficulty confronting the country today is the losses in communications among various parts of the Republic.

(Poland). Under another agreement, Germany has been given the right to build a motor speedway thru Moravia from Silesia to Austria, providing a short cut between Breslau and Vienna. Germany will pay for the construction and will have judicial sovereignty over it, altho the territory will remain part of the Czech state.

Other Reconstruction Measures

A program of public works in Slovakia concerns the development of communications, the electrification of the towns and the building up of new industries. Public works which are of immediate

use include the exploitation of Slovakia's water power. The most important plan is the electrification of the cities and the country districts, which is paricularly important for the mountainous regions where agriculture is impossible. There are some 60 important health resorts in Slovakia, such as Pieštany, Štrbské Pleso, Tatranská Lomnica, Sliač, Trenčianská Teplice, which will be advertized abroad more extensively. A geological investigation of Slovakia's huge resources in stone for building purposes and road construction, raw materials for the cement industry, and many rare ores, has been undertaken.

LABOR CAMPS

All grants for public relief have been stopped, and all unemployed must join the labor camps, organized on military lines for those over 18 years of age. In camps the labor workers are provided with board, lodging and clothing. Labor is awarded by a daily allowance to the men, and family allowances are also made. Unemployed women, so far as they are dependent upon manual work, are also organized in labor services. In filling vacancies either in the public works carried out by the state or in private enterprise, members of these units are given preference. Both in Bohemia and in Slovakia extensive road construction is thus being carried out.

POLITICAL CHANGES

The Second Republic of Czecho-Slovakia already has the form of a federal state of the Czechs, Slovaks and Carpathian Ukrainians, with central departments of national defense, foreign affairs and finance, while in other respects autonomy is enjoyed by the three peoples within their own frontiers. The Constitution recommends the preservation of the republican form of the state and of the parliamentary system. The division of the state authority into executive, legislative, and judicial is also maintained. The President is to have the right of veto over parliamentary decisions and a right to issue emergency decrees at any time when there is no parliament in session. The President is to be elected, as hitherto, by the National Assembly.

In addition to the legislative bodies for the provinces of Bohemia-Moravia, Slovakia and Subcarpathian Ukraine, there will be a joint legislative parliament, consisting of 200 members. Of these 140 will be members of the Bohemia-Moravian provincial parliament, 50 of the Slovak Parliament, and 10 from that of Sub-

carpathian Ukraine. The Upper House will consist of 24 members, made up of eight members from each of the three provinces. Two-thirds of the Senators will be elected by the provincial parliaments and one-third will be appointed by the President of the Republic. The Senate can reject laws decided by the Chamber of Deputies. Should the Chamber persist in its decision, the President of the Republic will finally decide.

The electoral system will differ considerably from that hitherto in force. The method of electing deputies and senators by lists will be abolished. Deputies will be elected by majority, and individually in their constituencies. There will be one parliamentary mandate to approximately every 60,000–80,000 inhabitants. The elector will give his vote for one candidate, and not as hitherto for a party. Only the People's Party of Subcarpathian Ukraine and the Slovak People's Party are permitted to exist. In Bohemia-Moravia, in November the Party of National Unity absorbed the dissolved Republic Party of the Agricultural Population and Small Farmers (Agrarians), the Czechoslovak National Socialist Party, the Czechoslovak Small Traders' Party, the Party of National Union, the Czechoslovak People's Party in Bohemia (Clericals), and the National League. The new bloc controls 101 seats in the Chamber of Deputies and has a decisive voice in the national life of the country. The opposition consists principally of the former Social Democrats.

CORN AND WHEAT IN MEXICO'S CHANGING ECONOMY*

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Back of the welter of conflict in present day Mexico, the labor struggles, the expropriation of the oil properties and the large estates, a silent but significant rivalry is developing between a very old crop and a comparatively new one—between corn and wheat. For corn has been the mainstay of Mexico for centuries and is today, but most of the country is ill suited to its growth. That corn has maintained its preëminent place, with merely a slight decline, is evidence of the long delayed industrial and agricultural revolution. The situation in Mexico today, in some respects, is similar to that of the United States at the beginning of the nineteenth century. Seventy per cent of the population is agricultural, the industries are not sufficiently developed to meet the needs of the people in spite of fairly abundant natural resources, and communication is so inadequate or costly that the special products of many regions cannot be marketed in all parts of the country. But the methods of agriculture are changing, new factories are being built and new roads constructed affording an outlet for local products and bringing the influence of North American and European culture to towns and villages hitherto isolated. Consumer demand is changing also and the production pattern will change to fit it, more wheat bread and fewer *tortillas,* more wheat and less corn. The following discussion is concerned with the fundamental factors in the production of corn and wheat and the tendencies toward their redistribution which, it is believed, represent the most important problems in Mexican agriculture.

CORN PRODUCTION

Corn is of more importance to Mexico than to any other country in the world; it occupies nearly two-thirds of the crop land; it supplies more than one-half of the people's food. Moreover, it is grown in every state and territory, in almost every settlement in the country, ranging from sea level to 10,000 feet and from the northern deserts where it must be irrigated to the southern rain forest where

* The preparation of this report was aided by a grant from the Fluid Research Funds of the University of Minnesota.

the crop often spoils from excessive moisture. The greatest production (Fig. 1) is on the Central Mesa in the states of Jalisco, Guanajuato, Michoacán, México and Puebla. These five states, together with Vera Cruz which is largely in the eastern lowland, account for one-half the national production. In Guanjuato, an extreme case,

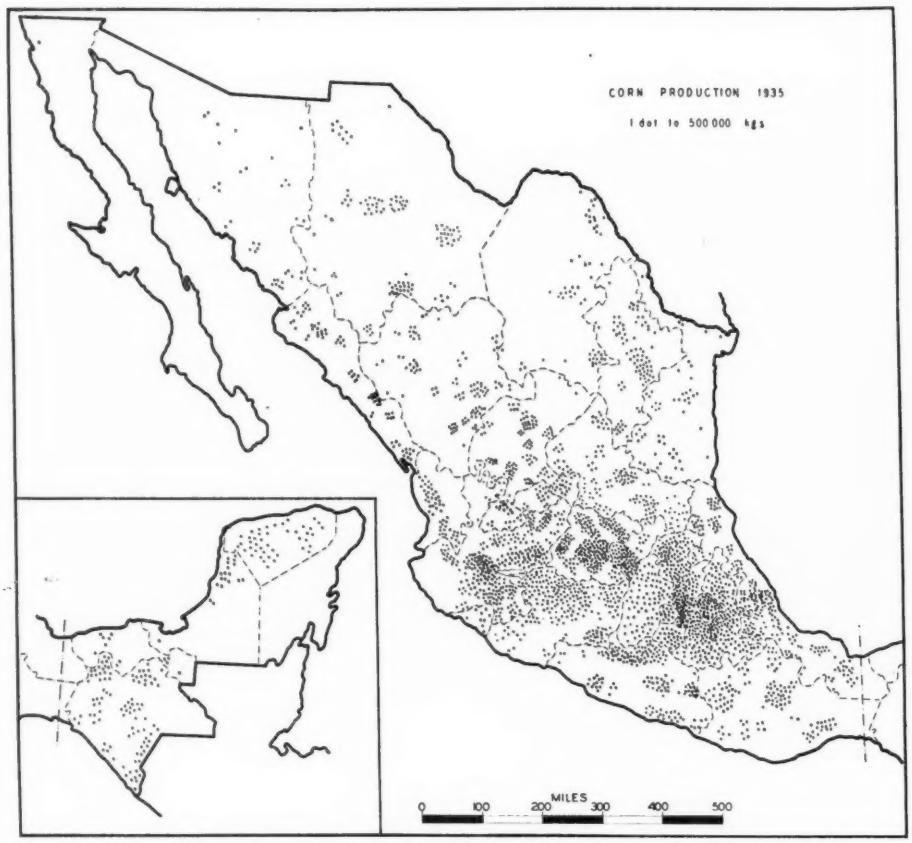

Fig. 1. Corn production in Mexico, 1935. Each dot represents 500,000 kilograms (app. 18,300 bushels), localized by municipios. The total production was 1,674,565,617 kilograms (61,200,000 bu.). Modified from a map in the *Boletín Mensual de Estadística Agrícola*. Secretaria de Agricultura y Fomento. No. 123. August, 1936.

80 per cent of the cultivated land is in corn, but the yield is low and it accounts for only 44 per cent of the total agricultural production, by value (in Iowa the percentages are 42 and 50 respectively). In northern Mexico most of the corn is grown in the favored parts of large basins where water is available for irrigation and altho yields are generally higher the total production is far below that of the Central Mesa. In southern Mexico rugged humid mountains limit

the production to valleys and coastal plains where corn comes into direct competition with plantation crops such as sugar, coffee and bananas, which yield a greater money return.

Climate is the most important limiting factor in Mexican corn production. Mexico includes a variety of climates but not the "corn" climate associated with the great corn belts in the Missis-

Fig. 2. A corn field on a rocky slope near Xilitla in southeastern San Luis Postosí. The slope angle is about 35 degrees and most of the soil has long since washed away. leaving large blocks of limestone. The field continues in cultivation. The view was taken in February and the corn was knee high.

sippi Valley, Argentine, the Po Plain, the Hungarian and Rumanian basins. That combination of hot summers, including hot nights, abundant rainfall with early summer maximum and a minimum before harvest, is scarcely to be found in Mexico. A somewhat similar climate is found on the eastern slopes of the Sierra Madre Oriental, but the area is small, the slopes too steep and the soil too thin to yield good crops year after year. The conditions of the corn climate may be approximated on the southern west coast by planting in the middle of the wet season and harvesting after the beginning of the dry season but, allowing for these adjustments, the fact remains that few parts of Mexico are highly favorable for the growth of corn.

In the Central Mesa both temperature and rainfall are limiting

factors. The Chapala district in the state of Jalisco produces much corn and is fairly representative of the Central Mesa. The principal city, Guadalajara, has an average of 37 inches annual rainfall with a strong summer maximum but the average temperature of the warmest month (May) is only 72°F. At Querétaro the rainfall is 20 inches and the warmest month 70°F., at Puebla the rainfall 31 inches and the warmest month 66°F. Because of the altitude of the

Fig. 3. Preparation of land for corn planting near Alcomán, state of Mexico. Note the one-handled plow, the makeshift harness. In this district corn is often cultivated between the rows of maguey, a few plants of which can be seen in the background. July.

corn growing areas of the Central Mesa the summer temperatures are to be compared with those of Minnesota, Wisconsin and Michigan, areas which are either in the northern edge of the corn belt or farther north. In Mexico, it should be noted, the lower summer temperatures are partially compensated by a much longer growing season. In northern Mexico the altitude of the arable basins is distinctly less and the temperatures higher, but this advantage is more than offset by the decreased rainfall, unless water is available for irrigation. In the coastal plain of eastern Mexico and the isthmus of Tehuantepec the climatic conditions for the growth of corn are much more favorable. The summer temperatures are sufficiently high and the rainfall is adequate south of Tampico. Thus, from the standpoint of climate, the middle East Coast apears to be the best district for corn production but the competition of other crops and the lack of cheap transportation to the large centers of population limit the production.

The largest areas of level land in Mexico are in the northern basins, the northeastern coastal plain and the peninsula of Yucatan. Since all of these districts are deficient in rainfall it follows that much corn must be grown on slopes in the more humid mountain regions. The steepest cultivated slopes easily surpass those of the

Fig. 4. Planting corn at Contreras in the Federal District. This field will be irrigated and the yield will probably be about 12 bushels to the acre. February.

southern Appalachians, frequently exceeding 50 degrees. Altho most of the soils on these slopes are naturally fertile, long continued cultivation has led to severe soil erosion and decreased yield (Fig. 2). In many parts of the Central Mesa there are abandoned fields with bare rock exposed. This is especially true of certain areas in Hidalgo, Morelos and Guerrero. Altho the extent of soil erosion has not been mapped it is certainly an important factor in limiting the yield of corn in Mexico.

The methods of cultivation vary in detail in different parts of Mexico but they are everywhere comparatively simple. Corn planting is going on in the country in nearly every month of the year and in southern districts corn may be found in various stages of growth at the same time. The usual planting period, however, is from February to August. The preliminary plowing or breaking is done with oxen, yoked by the horns to a wooden plow with a steel

share. Mules and horses are used less frequently, sometimes with a harness improvised from packsaddles (Fig. 3). After the first plowing the field is dragged with brush to break up the clods and is then laid off in rows. Hoes are used in planting (Fig. 4) except in a few localities where horse drawn drills are used. Small single or double plows, drawn by oxen are used in cultivation except on the steeper slopes. Harvesting methods vary also but the most common

Fig. 5. Cultivation of corn on an alluvial fan in central Nuevo León. In many such localities the rain is light and no water is available for irrigation. This field will yield about five or six bushels to the acre. August.

practice is to cut the stalks with the machete and shock for later husking. Corn fodder is a very important feed in a country where livestock receive little grain and where hay is scarce.

Since a large proportion of the corn in Mexico is grown on relatively small plots it is frequently intercultivated with other crops such as beans, bananas and even fruit trees. In the northeastern portion of the Central Mesa corn is grown between the rows of maguey plants and in other parts of the country it is intercultivated with various plantation crops. In the north corn often alternates with wheat on the same land in the same year, corn in summer and wheat in winter, but this often results in low yields of corn because of delayed planting.

In view of the widespread cultivation of corn in Mexico it is particularly significant that yields are the lowest in the world.

In the period 1925-29 the yield was 8.7 bushels per acre, compared with 31 bushels in Egypt, 27 in Argentine, 23 in the United States, 22 in Hungary and 21 in Italy. The yield varies in different parts of Mexico according to the climate, soil, methods of cultivation, etc. In the northern border states there is too little rain for the cultivation of corn without irrigation, except in the extreme east. There-

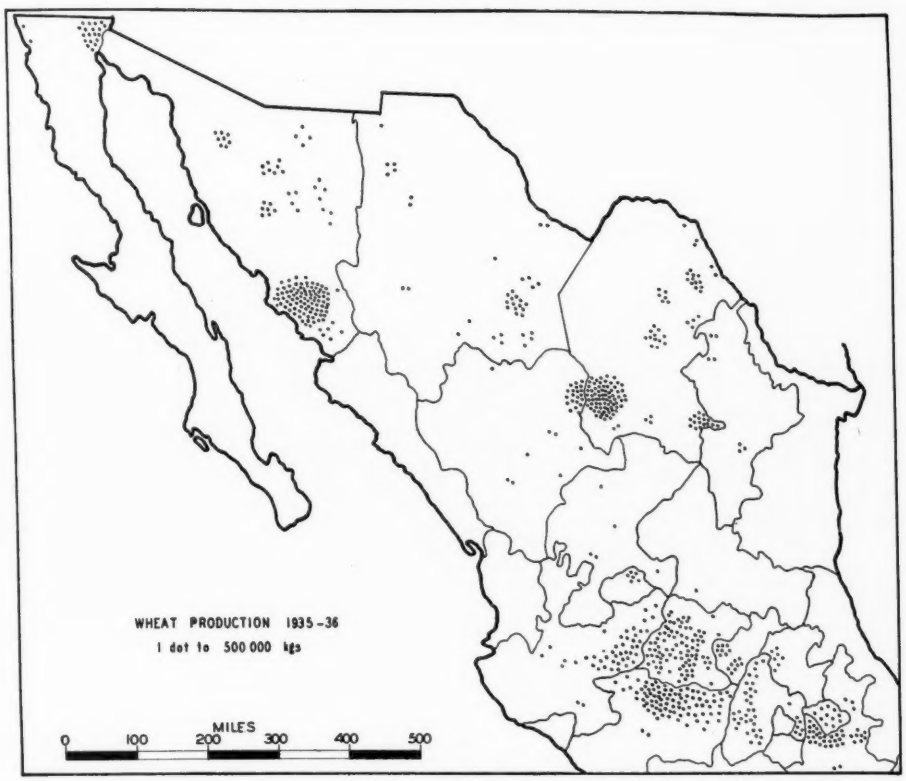

Fig. 6. Wheat production in Mexico, 1935-36. One dot represents 500,000 kilograms, localized by municipios. Data from *Boletín Mensual de Estadística Agrícola.* Cited above. No. 126. November, 1936. P. 1507.

fore it is either irrigated directly or is sub-irrigated in connection with some crop like cotton and as a result the yields are well above the average. Farther south irrigation is not necessary, often not available, and most of the crop is grown by dry farming methods. Rains are variable, however, there are frequent crop failures and the average yield is low (Fig. 5). In the Pacific Coast states, from Sinaloa to Chiapas the hot rainy summers are favorable to corn and the yields are comparatively high. In the Central Mesa, where production is greatest, yields are low. As already pointed out the

low summer temperatures are not favorable to corn and in addition the cultivation of many steep slopes and thin soiled areas contribute to the low yield. In the Gulf states the yields are higher than average but except for Vera Cruz the production is light. In the peninsula of Yucatan the production is light and the yields are low largely because of deficient moisture.

WHEAT PRODUCTION

Wheat is much more restricted in its distribution than corn but it is second in acreage, third in value (cotton is second) in Mexico and its importance is slowly increasing. The principal producing areas are the widely scattered oases in the north and the broad basins of the Central Mesa (Fig. 6). In the north much of the wheat is grown in the cotton regions but in the Central Mesa it is commonly associated with corn and, being a winter crop, it dovetails with either.

The Valley of Mexicali in the delta of the Colorado River is, in many respects a unique wheat producing region. It is the only region with a maximum of winter rain but the total rainfall is very light (average 3 inches) and all the wheat is irrigated. Cotton is first in importance, alfalfa is second in acreage, wheat third in acreage, second in value. Altho this region has good soils, abundant water for irrigation and the production of wheat fits in well with that of cotton, this region has a distinct handicap with regard to transportation. It has no direct rail or highway connection with the main body of the nation. Wheat and other commodities must move thru the United States via southern Arizona or to the Pacific via California in order to reach a large Mexican market. Profitable export to the United States is limited because of high tariffs.

The largest wheat producing region is in southern Sonora, in the vicinity of Ciudad Obregón and Navajoa. Here the rainfall is greater than at Mexicali but much of the crop is irrigated from the waters of the Rio Yaqui and the Rio Mayo. The important crops are wheat, corn and cotton in the order named, one of the few places in Mexico where wheat occupies a dominant position.

For many years the most important wheat producing area in northern Mexico was the Laguna region on the border of Durango and Coahuila and it remains a close rival of the Sonora region described above. Broad arid basins surrounded by low ranges, are irrigated by the floodwaters of the Nazas and Aguanaval rivers which have their headwaters in the Sierra Madre Occidental. The total area of the basins is more than six million acres of which

only one-tenth is cultivated. Approximately one-half of the cultivated land is in cotton, one-fourth in wheat and lesser amounts in corn and alfalfa.

In the Central Mesa conditions for growing wheat are moderately favorable. There is sufficient rain altho the distribution is not very satisfactory. The fall planting often follows the last of the late summer rains and no rain at all may fall on the crop. In spite of this fact good quality wheat can be produced if the proper seed

Fig. 7. In the broad basins of northern Mexico wheat is often an alternate crop with corn. In this basin of southern Nuevo León corn is grown in summer, wheat in winter. August.

is selected and proper methods of cultivation used. Usually, however, there is some rain during the winter period, and in many places it can be supplemented with some irrigation.

Altho the yields of wheat in Mexico are very low they are notably higher than those of corn, ranging from 8 to 18 bushels per acre. The highest yields are in the northern states, where irrigation is nearly universal, production is on a large scale with modern machinery, and the seed is carefully selected. Several varieties of hard winter wheat have been introduced and acclimated. In the northeast, especially in the Saltillo district and in Nuevo Leon the yields are somewhat lower. In the Central Mesa some attempts have been made to improve the quality of the seed but most of the product is still the soft winter variety. Machinery, both for cultivation and harvest, is not adequate. It is significant, however, that as a whole, the yield is slowly increasing and the area under cultivation is being extended altho even more slowly. There is a tendency for

the production to shift to the north, in spite of the fact that these areas are remote from the large centers of population. Most of the wheat is milled in the vicinity of production. Mexicali has a flour mill with a capacity of 200 barrels per day; Guymas, Torreon, Saltillo and Monterrey have mills as do most of the cities of the Central Mesa. Even tho the production of wheat and flour are steadily increasing Mexico continues to import both from the United States.

CORN, WHEAT AND POPULATION

The distribution of population in Mexico is very similar to that of corn and, as a result, more than two-thirds of the crop does not leave the region where it is produced. In the regions where there is an important commercial crop, however, there is a tendency to neglect the cultivation of corn. Thus the cotton regions of the north, the hennequen region of Yucatan and the coffee districts of Chiapas must import corn.

Considering the weight of corn per unit value and the incomplete transportation facilities, it is not surprising that the price of corn should vary widely in different parts of the country and that the prices should fluctuate sharply as the yield changes in a particular region. For the period 1929-33 the average rural price of corn ranged from 33 and 65 cents (U. S. Cur.) per bushel. The retail prices are more variable and altho adequate data are not available, newspaper reports in the winter of 1937-38 indicate an average price of 18 centavos per kilogram approximately $1.37 per bushel, but in regions where the crop was poor the price was much higher. In January 1938, according to newspaper acounts, the retail price in Yucatan ranged from $1.90 to $3.04. Some of the causes of regional variation in prices have been suggested. Higher yields in some parts are undoubtedly accompanied by lower cost of production, but some such areas cannot find a wide market because of poor transportation. As communication improves the prices will probably become more uniform.

The retail price of wheat is scarcely comparable to that of corn since little is sold as grain. The price of wheat bread is higher than "corn" bread (*tortillas*) because of the more elaborate processing, otherwise a much larger proportion would be consumed. It is estimated that the minimum requirements of corn for food is about 85 kilograms per capita, per year but when prices are low it is probable that the consumption is higher. The production of wheat is approximately 20 kilograms per capita and altho there is a

tendency toward a greater production and consumption of wheat, there is little indication of a corresponding decline in the use of corn. But in consideration of the fact that Mexico is better suited, climatically, for the production of wheat, and that the tastes of the people are changing rapidly under the influence of outside culture it is not too much to suggest that wheat production will continue to increase and that corn as a food will decline. Corn will decline first in the northern irrigated areas and in the drier and cooler parts of the Central Mesa. It may very well increase in the eastern lowland, especially if accompanied by a greater production of meat.

SPAIN

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Spain and Portugal are usually studied together in the intermediate grades tho Spain may be treated with the larger geographic unit, the Mediterranean Countries. The following method for teaching the geography of Spain is recommended to those who wish to try a plan whereby they can deal individually with the members of a large class. The procedure is such that the teacher will have the opportunity to see how well pupils can read maps of the text, and it also provides for checking the reading so that more teaching may be done where it is needed. The comprehension and classification of information obtained from the text, reference books and pictures are also emphasized. The necessity for following written directions and finishing each piece of work before beginning the next is an important provision in the plan of study, making it possible for pupils to progress at different rates. An effort has been made to provide a variety of work which will make it possible for pupils of different interests and abilities to apply skills and abilities acquired in other subjects.

After an appropriate introduction to the study of Spain in which the pupils may tell what they have heard or read previously the work sheets may be given to the class. They may be told that after they have answered the map questions and had them corrected that they may proceed independently with their study thru the directions given. It is suggested that sheets of directions be supplied to each pupil so they may check the exercises as they are completed.

THE WORK SHEET

1. Map reading exercise. Turn to the largest map of Spain in your text. Read each statement. If it is true, write the word "yes" before it; if it is not true, write the word "no."

1. Most of Spain is more than 1000 ft. high.
2. The lowlands are in the central part.
3. Most of the highest land is due north of Madrid.
4. The lowland strip along the coasts is about 100 miles wide.
5. Four important river valleys are shown.
6. All the rivers flow west.
7. Ebro River is in northeastern Spain.
8. Guadalquivir River is in southern Spain.
9. The coast of Spain is more irregular than the coast of Norway.
10. The 40th parallel crosses northern Spain.
11. Madrid is about the same distance from the equator as New York.
12. Spain is about 1500 miles from north to south.
13. Spain is separated from Africa by the Strait of Gibralter.
14. The boundary between Spain and France passes thru the Pyrennes Mountains.
15. The Mediterranean Sea borders the west coast of Spain.
16. The only country touching Spain is France.
17. Barcelona is nearer Italy than Bilbao.
18. Barcelona is nearer France than Bilbao.
19. Valencia is near the center of the east coast.
20. Seville is in southern Spain.

After you have checked your answers by comparing them with those of other members of your class, write twenty correct statements which are suggested by this exercise on a page for your notebook, entitled

IDEAS FROM THE MAP OF SPAIN

2. On a sheet of graf paper show how the height of land changes from the Atlantic coast to the Mediterranean coast along the 40° parallel. As a group decide upon the vertical scale which you should use.

3. Read all the material in your text which tells about Spain. Some geographers tell you that Spain has five very unlike regions, 1) the central plateau, 2) the northwest coastal region, 3) the eastern coastal region, 4) the Ebro Valley, and 5) the Guadalquivir Valley. After you have read your text see if you can tell something about each of these regions. Your teacher will hear you report how the people live in each section. Be sure you can tell some of the reasons why life is different in these five regions.

4. On an outline map of the Spanish Peninsula print lightly the names of "the five divisions." You need not put in the bound-

ary lines for each. Locate the following places on the map in your text and then print the names on the outline map. Before your map is inked your teacher will check it for you.

Bilbao	Valencia	Guadalquivir River
Madrid	Seville	Barcelona
Pyrennes Mountains	Mediterranean Sea	Douro River
	Atlantic Ocean	

5. Look at the pictures on the bulletin board. Decide in which region each picture was taken. Keep your record in your notebook like this:

The picture shows	The name of the region
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

(Provide pictures showing such scenes as: an olive orchard, sheep on the Iberian Plateau, an iron mine of northern Spain, a city street scene, fishing of northwestern coast, cork oak, donkey trains.)

6. Prepare a special report on some topic marked in the books on the table. You will be given an opportunity to tell what you have read. (Use such topics as: The Cork Industry, The Manufacturing of Spain, Methods of Transportation, The Houses, Garden Spots.)

7. Make a page for your notebook entitled, "Some 'Whys' of Spain." Write statements telling why:

1. There are few forests.
2. Iron ore is sold.
3. Land travel is difficult.
4. Barcelona manufactures textiles.
5. Oranges are grown near Valencia.
6. Winter wheat is the chief cereal crop.
7. Tree crops are important.
8. The people find it difficult to work together.
9. Many people are poor.
10. We are all interested in Spain today.

8. Find a paragraph describing Madrid and the street pattern of other Spanish cities. Make as neat a drawing as you can to illustrate the plan of Spanish cities.

9. Look thru the newspapers to find an article about Spain. If you can locate the places mentioned put them on your outline map. In what connection is each mentioned?

10. When you have completed the work sheet to this point you may begin work on a pictorial map of Spain. (1) Use a "pattern" of Spain to make a large outline map. (2) Make a list of the names of pictures you wish to put on the map. (3) With pencil place on the map a small number where each picture is to be drawn. (4) Make a trial drawing of each. (5) Have your pictures approved. (6) Transfer each to the place you have marked. (From a wall map of Europe the teacher make a pattern of stiff paper of an appropriate size for drawing paper.)

THE A B C'S OF THE A B C COUNTRIES

E. RAY CASTO AND GARNET C. BEARD
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A is for
(1). -------, a forage crop which is a perfect adaptation to the soil and climate.
(2). ------, a large river flowing thru Brazil.
(3). ----------, a city of Chile which is an important railway terminus.
(4). -------, a desert in Chile from which large quantities of nitrates are obtained.

B is for
(1). -----, a port of northeastern Brazil.
(2). -------, a fruit grown in Brazil which is exported largely to the United States.
(3). ----, a product of the cattle industry of which Argentina is the leading exporter.
(4). -------, substances found in Chile from which borax is obtained.
(5). ------ -----, an important port of Argentina located at the mouth of the La Platte River.

C is for
(1). -----, the bean from which chocolate is prepared.
(2). -----, livestock raised in great numbers in the A B C countries.
(3). ----, a fuel little found in South America, but chiefly in Chile.
(4). ------, a beverage of which Brazil is the chief producer.
(5). ------, a metal in the production of which Chile ranks second among all nations.
(6). ----, a cereal crop much grown in Argentina and Brazil.
(7). ------, a fiber crop grown in northern Argentina.

D is for
(1). --------, an industry which has progressed rapidly around the urban centers of Argentina.
(2). --------, a valuable form of carbon found in Brazil.

E is for
(1). -----, a compact, dark wood found in Brazil.

F is for
(1). ----, a fiber plant grown in Argentina for its seed.
G is for
(1). -----, a livestock raised in the semi-arid areas of Argentina where sheep-raising is unprofitable.
(2). ----, a metal mined in Chile by the placer method.
(3). ------, a fruit exported from Chile to the United States during the northern winter.
H is for
(1). --------, a metal ore which is found in enormous quantities in Brazil.
(2). -----, an important export of the cattle industry.
I is for
(1). ------, a by-product of the nitrate-refining process.
(2). ----, a high-grade ore which is found in Brazil.
(3). -----, a product of the tagua palm.
J is for
(1). --------, a tree whose leaves provide fiber for Panama hats.
(2). ----, a fiber product of India essential to the coffee and grain industries.
K is for
(1). ------, a type of clay used locally in the pottery industry.
(2). -----, a vegetable cotton or silk used in making pillows and mattresses.
L is for
(1). -------, an oil obtained in Argentina from the seed of the flax plant.
(2). -----, a beast of burden domesticated by the Indians of the Andes Mountains.
(3). ------, one of the worst agricultural pests in northern Argentina.
M is for
(1). --------, a much prized wood used in making furniture.
(2). ---------, a metal of Brazil important in the steel industry.
(3). ----, a hearty draft animal.
N is for
(1). ---------, drugs, many of which are derived from the plants of the A B C countries.
(2). -------, a valuable export of Chile taken from the Atacama Desert.
(3). ----, a food product of the Amazon Valley.
O is for
(1). ----, a cereal grown in the cooler and moister areas.
(2). ---, a mineral of Patagonia.
(3). ------, a tropical citrus fruit.
P is for
(1). ------, the name of a large important grazing region in Argentina.
(2). --------, an important root crop native to this section.
Q is for
(1). ---------, a tree rich in tannic acid.
(2). -------, an extract of the bark of the cinchona tree.
R is for
(1). ----, a grain produced in the coastal lowlands of Brazil.
(2). --------, a hard, heavy wood exported from Rio de Janeiro.
(3). ------, an important product of the Amazon Basin essential to the automobile industry.
S is for
(1). ------, the forested areas of the Brazilian lowland.
(2). -----, the chief livestock of Patagonia.
(3). ------, a mineral product of the Andes.

(4). -----, a product of the lowlands of northeastern Brazil.
(5). -----, a livestock of increasing importance in the corn areas.

T is for
(1). -----, the palm which produces vegetable ivory.
(2). -------, a starch obtained from the roots of the manioc plant.
(3). -------, a native American plant grown in Brazil.
(4). --------, a metal found in the north-central part of Argentina used much in electrical work.

U is for
(1). ---------, a pass employed as a means of communication between Buenos Aires and Valparaiso.

V is for
(1). ----------, the leading product of cultivated areas near cities.
(2). --------, extensive areas of Argentina and Chile yielding wine and raisins.

W is for
(1). -----, the chief potential source of power.
(2). -----, the leading cereal of the A B C countries.
(3). ----, a product of northwest Argentina produced to the amount of 160 million gallons annually.
(4). ----, an important fiber exported for use in the textile mills of the United States and England.

X is for
(1). ------, a form of beef used much in the mining area.

Y is for
(1). ----- ----, a beverage produced in forest areas of northern Argentina and Brazil.

Z is for
(1). ----, a type of cattle imported from India.

KEY

1. Alfalfa
2. Amazon
3. Antofagasta
4. Atacama

1. Bahia
2. Bananas
3. Beef
4. Borates
5. Buenos Aires

1. Cacao
2. Cattle
3. Coal
4. Coffee
5. Copper
6. Corn
7. Cotton

1. Dairying
2. Diamonds

1. Ebony

1. Flax

1. Goats
2. Gold
3. Grapes

1. Hematite
2. Hides

1. Iodine
2. Iron
3. Ivory

1. Jipijapa
2. Jute

1. Kaolin
2. Kapok

1. Linseed
2. Llama
3. Locust

1. Mahogany

2. Manganese
3. Mule

1. Narcotics
2. Nitrate
3. Nuts

1. Oats
2. Oils
3. Oranges

1. Pampas
2. Potatoes

1. Quebracho
2. Quinine

1. Rice
2. Rosewood
3. Rubber

1. Selvas
2. Sheep
3. Silver

4. Sugar
5. Swine

1. Tagua
2. Tapioca
3. Tobacco
4. Tungsten

1. Uspallata

1. Vegetables
2. Vineyards

1. Water
2. Wheat
3. Wine
4. Wool

1. Xarque

1. Yerba Mate

1. Zebu

A UNIT IN SIXTH GRADE GEOGRAPHY

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"My mother was house cleaning and came across this fan. I thought that the boys and girls would like to see it because it came from China."

This remark was made one morning by a sixth grade girl, as she handed me a fan. The fan was a beautiful piece of Chinese workmanship—a framework of delicately carved wood to which were fastened white quill feathers tipped with peacock feathers. On the white feathers were painted Chinese figures and flowers in beautiful colors.

Here was a suggestion. Why not ask the pupils to bring in beautiful, interesting, fine things from the different countries of Europe and Asia? (The study of these two continents comprises the year's work in geography.)

The suggestion was made to the class and in the way of encouragement, I promised to bring in some pieces of tied-dyed silk which I had received recently from Indo-China.

The following day some attractive pieces were brought in, then each day following, more pieces and more pieces. Each was presented to the class by the bringer, then questions followed. "What kind of wood is that?" "Why does the Tower of Pisa slant?" "Where is Perugia?" "Of what is pewter made?" etc., etc.

Parents became interested and were willing to contribute some pieces of considerable value. Some brought in pieces which they could not quite trust to their children. In the homes there must have been rather lengthy and interesting conversations in regard to pieces for the exhibit. Some pupils made a visit to the City Children's Museum to study further along certain lines. Almost every child in the room contributed pieces for the exhibit.

In free time, pupils spent their time examining the many pieces which were brought in and they seemed to enjoy their schoolroom more, since they had placed their contributions there.

All articles were exhibited in a pleasing way, on a large screen or on tables. A label was placed by each article. After certain articles had been displayed a few days, they were sent home and other articles were put in their places.

Pupils eagerly turned to reference materials to find facts about many of the pieces brought in. Maps were consulted for locations of places, including the latitude. After reference work was carried out, individual reports were given on such topics as the following: ivory, lapis lazuli, onyx, Tower of Pisa, garnets, pearls, carnelian, cloisonne, jade, coral, edelweiss, Chinese lacquer, pewter, brass, teak wood, ebony, bamboo, etc.

The girl who brought the fan reported on bamboo. She was overjoyed when she found the statement in the encyclopedia—"Bamboo is also used for framework of fans." This solved the question which arose when she brought her Chinese fan—"Of what kind of wood is the carved framework made?"

Almost every article brought in was a manufactured article. There were beautiful textiles, jewelry, pottery, china, brass pieces, silver pieces, dolls, beautifully carved wooden pieces, and many other most interesting articles. As a result, our discussions were concerned with such questions as the following:

1. What kind of workers produced the certain piece?
2. Cost of materials used?
3. Amount of material used?
4. Amount of pay received by each worker?
   a) Skilled workers including artists, artisans, craftsmen
   b) Unskilled workers
5. Prices paid by purchasers?
6. Were raw materials produced in the country where the article was manufactured? If not, from where were they obtained, and how is it possible with this condition to manufacture and profit by it?

This unit was carried on for three weeks. Much geographical knowledge was acquired and will be remembered, I think, because the unit was quite different from other units carried out in the geography class during the year. It held the pupils' interest to the very end.

Other worthwhile outcomes were:

1. A broader understanding and a greater liking for peoples of other countries
2. An added knowledge of the art of these countries
3. A better knowledge of our dependence on other countries for many articles which we use in our homes
4. An enlarging of pupils' geographic vocabularies

5. A better understanding of the vastness of the earth
6. An acquaintance with many new cities and countries
7. A broader acquaintance with the customs of the people of other lands
8. The map habit better established

PLACE NAMES IN FOURTH GRADE GEOGRAPHY

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What place names should be taught in beginning geography? The writer became interested in this problem when he worked with a committee of his teachers in selecting a text for the fourth grade. Even a casual examination of beginning geography texts convinces one that there is a big difference in the place names they contain. A critical examination confirms that conviction.

The problem implies a source of place names. Textbooks since they are almost universally used as media of instruction, seem to be the most practicable source.

An analysis of eight fourth grade texts of the one-cycle type reveals some interesting facts. The writer listed the place names in these books and tabulated their frequency. Six hundred eighty one place names appeared 12,192 times. Among these were 10 names of continents and continental areas, 95 names of countries and states, 199 names of land forms and miscellaneous areas, 208 cities, 73 rivers, and 96 bodies of water and miscellaneous water forms.

Textbook writers appear to select their place names without regard to commonly accepted criteria. One author used 99 different place names and another 308. The average for the eight books was 201. Three hundred fifty nine place names are mentioned by some one of the eight authors, and not by any others. One hundred nineteen are common to but two of the texts. This divergence shows the need of criteria to control selection.

For the purpose of limiting the list of place names to be taught the writer chose three criteria:

1. Spread—appearance in half or more of the books analyzed.

* This article was prepared while the writer was superintendent of city schools at Scottsbluff, Nebraska.

2. Social utility—appearance in one of the objective studies of place names, more particularly the studies of Washburne,[1] and of Rugg and Hockett.[2]
3. Value in exemplifying primary geographic relationships as recommended by the Committee on the Teaching of Geography or value in the development of the geographic abilities recommended by the same committee.[3]

Application of the first criterion excluded 530 of the 681 place names found in the eight books. Only 151 of the 681 place names appeared in four or more of the books. There were 8 continents, 27 countries and states, 41 land forms and miscellaneous land areas, 49 cities, 16 rivers and 20 bodies of water and miscellaneous water forms.

When the second and third criteria were applied 117 more place names were eliminated leaving only 34 that meet the criteria imposed. These are:

A. Continents
   1. Australia
   2. Europe
   3. Africa
   4. Asia
   5. South America
   6. North America

B. Countries and States
   1. Switzerland
   2. China
   3. United States (Home Country)
   4. The Netherlands (Holland)
   5. Norway
   6. Egypt
   7. Italy
   8. Japan
   9. Arabia
   10. Home State

C. Miscellaneous Regions
   1. Sahara
   2. Amazon
   3. Arctic
   4. Newfoundland
   5. Congo
   6. Northern Hemisphere
   7. Southern Hemisphere

D. Mountains
   1. The Alps

E. Rivers
   1. Amazon
   2. Nile
   3. Congo
   4. Yangtze

F. Bodies of Water
   1. Mediterranean
   2. Atlantic
   3. Pacific
   4. North Sea
   5. Arctic
   6. Indian Ocean

[1] W. C. Washburne. Basic Facts Needed in History and Geography; A Statistical Investigation. Twenty-second Yearbook of the National Society for the Study of Education. Part II, pp. 216-233. Public School Publishing Company, Bloomington, Illinois, 1923.

[2] H. O. Rugg and John Hockett. Objective Studies in Map Location. Social Science Monographs. No. 1. The Lincoln School of Teachers College. New York City, 1924.

[3] A. E. Parkins and others. The Teaching of Geography. Thirty-second Yearbook, Part I. National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1933.

These thirty-four place names seem to be educationally valid. They are at least as valid as the criteria. They are included in half or more of the eight most widely used fourth grade one-cycle textbooks. They meet the known requirements of social utility. They meet the prescriptions of the Committee on the Teaching of Geography as to grade placement.

To many this list will seem all too meagre. They will want to make additions. The writer ventures to suggest that if other place names are added to this basic list that a supplementary list be selected in accordance with criteria one and two above. This procedure will not violate a common method used in all the textbooks analyzed, namely "journey geography."

Where "journey geography" is used with any realism it seems necessary to include certain place names. Those most commonly used by textbook writers, that do not meet criterion three are cities, rivers and other water forms. The most frequently mentioned American cities that meet criteria one and two are:

New York	Philadelphia
Chicago	San Francisco
Boston	Washington

The most frequently mentioned foreign cities meeting the same criteria are:

Rome	The Hague
Peiping	Geneva
Athens	Cairo
Shanghai	Amsterdam

The most frequently mentioned rivers meeting the two criteria are:

Rhine	Missouri
Danube	Delaware
Mississippi	Ohio
Hudson	

The bodies of water most frequently mentioned that meet the two criteria are:

Suez Canal	Gulf of Mexico
Great Lakes	Strait of Gibraltar
Red Sea	

Another common practice is the naming of trade centers in or near a region described. For illustration, Leopoldville and Matahdi are mentioned with high frequency in connection with life in the

Congo. In describing and explaining Amazonian life, frequent mention is made of Belem, Iquitos, and Para. None of these, however, meet the criterion of social utility. Place names that do meet this criterion mentioned in "journey geography" are listed above.

On the basis of spread and frequency of use, certain place names that could contribute to the ability to use globe and hemisphere maps might well be included. If they are, it would seem reasonable to add the following:

Antarctica	Isthmus of Panama
Greenland	Isthmus of Suez

The problem of what place names to teach in the fourth grade probably cannot be finally solved. Until further evidence demonstrates otherwise the writer intends to recommend the mastery of the basic list according to Ridgley's specifications.

"1. Name, including pronunciation and spelling.
2. Location, to be given with sufficient fullness and accuracy to enable another person to find it promptly on the map.
3. Such geographic facts as the importance of the place warrants."[4]

The third specification is to be limited, of course, by the pupil's ability to understand "importance." The writer also intends to recommend adding such place names from the supplementary list as seem to individual teachers necessary or educationally expedient. Incidentally, if all the supplementary group were added the list would still be less than half as long as the shortest list in any of the textbooks.

Is the list too short? The writer does not know.

(This article is an abstract from the writer's Field Study Number One submitted to the Faculty of the Division of Education of the Colorado State College of Education, Greeley, Colorado, in partial fulfillment of requirements for the degree of Doctor of Philosophy.)

[4] D. C. Ridgley. The Necessity of Accurate Knowledge about Places. JOURNAL OF GEOGRAPHY, Volume 25, May 1926.

THE BOSTON MEETING OF THE NATIONAL COUNCIL OF GEOGRAPHY TEACHERS

FLOYD F. CUNNINGHAM, Secretary

The twenty-fifth annual meeting of the National Council of Geography Teachers was held at the Parker House Hotel, Boston, on December 27 and 28, 1938.

The excellent program arranged by President J. R. Whitaker was well received by the large number in attendance.

The meeting opened with greetings by Professor Kirtley F. Mather of the Department of Geology and Geography of Harvard University. The response was given by David J. Swartz, Haaren High School, New York City.

The first paper on the "Influences of Educational Trends on Methods and Materials in Geography" was presented by Katheryne T. Whittemore of the State Teachers College, Buffalo, New York, who showed that many trends in education today are having influence on methods and materials in geography. "Among these are three, not coordinate in kind or value, but which have a certain unity in their effect on geography: the trend in some localities toward a unified or fused course in social studies, the decreasing standardization in state and local courses of study, and the classroom procedure called unit teaching." The influence of these on needed materials in geography was emphasized and that on methods was discussed only so far as it bore on the problems of materials.

Miss Marguerite Uttley gave a comprehensive report of the Testing Committee. The fourth grade test has been tried out in a number of schools and is now about ready for publication.

"Gradations of Map Learnings" was the title of a paper presented by Clara M. Shryock of the Cambria County Schools, Wilmore, Pennsylvania. Miss Shryock brought out the fact that just as units of work are carefully graded to fit the abilities and needs of the children of the different educational levels, so must the maps used at the various learning levels be of varying complexity, gradually increasing in difficulty from level to level, so that map-reading ability may develop step by step.

Following the presentation of these papers there was a discussion led by Professor Edwin H. Reeder, College of Education, University of Illinois.

The final paper of this session was entitled "This Boston," pre-

sented by Harold Kemp of the Department of Geography, Harvard University.

Tuesday afternoon session was opened with a paper entitled "Equipping a High School Room for Teaching Geography" by Neal Martin of the Senior High School, Wauwatosa, Wisconsin. Mr. Martin analyzed very carefully how classroom teaching can be extended, clarified, and enriched thru the use of carefully selected geographic aids, such as maps, globes, exhibits, motion pictures, slides, film strips, etc.

In the second paper, "Economic Geography and Its Application to the Local Community," presented by George F. Howe, of the State Teachers College, New Britain, Connecticut, it was brought out that the local community should play a larger part than it usually does in the study of economic geography. "A study of the development of the local community should give the geography instructor an opportunity to make for a more enlightened citizenship in the years to come."

Lenox E. Chase, A.B. Davis High School, Mt. Vernon, New York, presented a paper entitled "Teaching Economic Geography Thru Problems." Miss Chase called for a more effective teaching of geography thru problems. "Economic geography teachers' responsibilities are to instill sympathy for other nation's problems, and as far as our conscience can agree with their methods, a respect for their methods of solution."

Professor George T. Renner of Teachers College, Columbia University, presented a paper entitled "The Teaching of the Conservation of Natural Resources." "Conservation of national resources is one of the crucial problems facing the American people. It constitutes a vigorous challenge to the schools. Education objectives should be set up and a program for instruction outlined," said Professor Renner. After stating the problem and the objectives in conservation education, he outlined a program for higher education, for secondary education, and for the elementary schools respectively.

A lively discussion followed, led by Mattie Sue Walker, Commercial High School, Atlanta, Georgia, Professor W. Elmer Ekblaw, Clark University, and Helen M. Strong, Soil Conservation Service, U. S. D. A.

Tuesday evening Professor Wallace W. Atwood, President of Clark University, delivered an illustrated lecture entitled "From Capetown to Mombasa." With small Kodachrome slides and Kodachrome motion pictures, Dr. Atwood made those of the audience feel

as if they had been transplanted to African territory for an hour and a half.

The first paper of the Wednesday morning session was entitled "Mexico in Transition" presented by Ben F. Lemert of Duke University. "The Mexican people are remoulding their environment that they may better adapt themselves to it and gain greater utility from it," said Mr. Lemert. "The geographer has the opportunity to observe the change in environment and the effect that change is having upon the people responsible for it."

"Changes in the Geography of Foods" was the title of a paper by Ethel C. Rothwell, State Teachers College, Milwaukee, Wisconsin. Miss Rothwell showed how many worthwhile activities grew out of a study of foods by the fourth grade of the training school of Milwaukee State Teachers College. A significant outcome was the development of geographic principles and concepts.

"The Use of Statistics in Geography" by Alice Foster of the University of Chicago, was the third paper presented. Miss Foster showed thru the use of slides how statistical data can be used to enliven the geography lesson.

A discussion followed the presentation of the three papers, led by Professor J. Russell Smith of Columbia University.

About eleven-thirty an excursion to the Babson Institute was made under the direction of Wallace W. Atwood, Jr. Here the members of the party inspected the Giant Relief Model of the United States which is being constructed under the direction of Professor Atwood.

The Wednesday morning session opened with Dr. Edwin H. Reeder, First Vice-President, presiding. The first paper entitled "The Methods Course in the Teachers College" by Edna E. Eisen, Kent State University, Kent, Ohio, was read by Mrs. Mattie Sue Walker. Miss Eisen emphasized the necessity of having courses in the teachers college that will give prospective teachers experiences in analyzing well-organized geographic materials at various levels to discover for themselves the special contribution which the types of understandings developed make in the general scheme of education. The next paper, "Experiences in Presenting Work in Field Geography to Prospective Teachers—Progress Report" was presented by Mr. L. C. Davis, State Teachers College, Indiana, Pennsylvania. This report brought out the valuable work in field geography that is being done at the State Teachers College under the direction of Mr. Davis.

"Geography Between the Sciences in the University" was the

title of a paper presented by Guy-Harold Smith of the Ohio State University. Professor George J. Miller, Editor of the Journal of Geography, discussed at length the "National Council—Past and Future." Following the presentation of the papers a discussion was led by George Primmer, State Teachers College, Duluth, Minnesota, and R. M. Brown, College of Education, Providence, R.I.

Following the annual banquet the Distinguished Service Award was presented by Professor L. O. Packard to Professor George J. Miller, Editor of the Journal of Geography and Professor of Geography at the State Teachers College, Mankato, Minnesota.

The annual address was given by Professor George B. Cressey of Syracuse University who discussed "The Changing Siberian Landscape." The Council is greatly indebted for Professor Cressey's interpretation. His discussion was well illustrated with slides, both black and white and colored.

BUSINESS MEETING, 1938

The annual meeting of the Board of Directors and of the Executive Committee of the National Council of Geography Teachers was held at the Parker House, Boston, in two sessions—the first, December 27, 1938, at ten o'clock and the second, December 28, 1938, at ten o'clock.

First Session

The minutes of the twenty-fourth annual meeting held at Ann Arbor, Michigan, were read by the Secretary and approved. After the reading of the minutes, President Whitaker turned to the reports of various committees.

Mr. Ralph Brown, Chairman of the Committee on Classification of Climates, was unable to be present. President Whitaker stated that he expected a report from the Committee within the next year.

The Nominating Committee, consisting of Miss Zoe Thralls, chairman, Mr. Leonard Packard, and Miss Sue Walker, presented its report which consisted of the following slate:

President, Edwin H. Reeder
First Vice-President, Cora Sletten
Second Vice-President, O. W. Freeman
Treasurer, H. H. Russell
Secretary, Floyd F. Cunningham
Member Distinguished Service Award, Helen Strong, Term to expire in 1943
Executive Committee: J. Russell Whitaker, C. E. Cooper, Zoe A. Thralls (terms to expire in 1941); Edna Eisen (to complete term of De Forest Stull, deceased, term to expire in 1939)
Directors-at-Large (elected for one year): George Primmer, Ruth Baugh, Thomas Barton, H. H. Addicott.

By vote of the Board the slate was elected as presented.

In the absence of H. H. Russell, Treasurer, the Treasurer's report was distributed by the Secretary and after sufficient time for all present to study the report, it was moved and duly seconded that the report be accepted. The motion carried.

The next report was that of the Committee on Tests made by the Chairman, Miss Marguerite Uttley. Miss Uttley stated that the Committee felt that the present test (fourth grade test) is now ready for publication. After much discussion pertaining to

the publication of the test, it was moved that the report be accepted and that the Board of Directors approve the plan for pushing the results on to publication. This motion was duly seconded and was carried. It was furthermore moved that an additional $100 be appropriated for the work of the Committee on Tests. This motion was duly seconded and was carried.

Miss Zoe Thralls gave a report for Miss Norah Zink, Chairman of the Committee for Summarizing and Abstracting Researches in Geographic Education. The report stated that Miss Zink had examined and abstracted 282 research masters' theses and doctors' theses. Of the 282 she has three to complete. This work brings the research in geographic education, that is, the abstracts and reviews, up to date and gives us a complete picture of what has been done. The matter of the publication of this material next occupied the attention of the Board. After much discussion by several members, it was moved that the Chair appoint a committee to investigate the possibilities of having this report published by some regular concern, and, if perchance, that is not feasible, then to carry to the Research Committee a very strong recommendation that Miss Zink's report be given very careful consideration as a worthy research project. This motion was duly seconded and was carried.

In connection with the work of the Committee on Summarizing and Abstracting Researches in Geographic Education, it was brought out that only $50 thus far had been appropriated for carrying on the work. In view of the fact that it appeared that around $200 would be needed to complete the work, it was moved that the Board recommend to the Research Committee that they give serious attention to the appropriation of the additional $150 with the understanding that if the sum is not paid from the research funds, the matter is to be referred back to the Board for later action. This motion was duly seconded by several of the members present and was carried.

Following the discussion President Whitaker appointed on the Committee, Edwin H. Reeder, the incoming president, George J. Miller, Editor of the JOURNAL, and Zoe A. Thralls, member of the Research Committee.

It was moved that the Board accept the report of Miss Zink as made by Miss Thralls and that she be commended for the fine piece of work that she has done thus far. The motion was duly seconded and was carried.

The next order of business was a report of the Research Committee made by Miss Thralls, Chairman. Miss Thralls discussed the advisability of inaugurating a definite procedure or routine to handle any applications for research funds. "For instance, in other organizations with which I am connected where they have such funds, there is a definite organization, well-planned and well-executed, to which applicants must apply for aid for carrying on their problems. An applicant must apply, state the problem that he wishes to work on, plan that problem, or hand in a plan, give a thoro explanation of it so that we really know he is going to do something, and also have some recommendation from people who know him. Then I think we have a basis on which to proceed and the Committee can then investigate. I think that is one thing the Committee should do this year—to set up some sort of definite routine that can be used to guide them in their decisions, and, furthermore, it should be publicized to some extent." It was agreed that printed forms would be advisable. It was moved that the report of Miss Thralls be accepted. This was duly seconded and was carried.

The next report was that report of the Educational Relations Committee made by the Chairman, Mrs. Erna G. Gilland. Mrs. Gilland reported the work of the committee with reference to the following: The editing of the geography issue of *Educational Methods,* the meeting of the National Education Association in New York, the San Francisco meeting of the N. E. A., the geography broadcasts of the American School of the Air, the Rio de Janeiro meeting of the World Federation of Educational Associations. After much discussion it was moved and seconded that the report of the Educational Relations Committee be accepted. The motion carried.

The next order of business related to certain invitations that had been extended to the National Council relative to the place of meeting next year. President Whitaker read a letter from Professor Colby of the University of Chicago, inviting the Council to hold its next meeting at the University of Chicago. Professor Bengtson extended an invitation from the Chamber of Commerce of Omaha requesting that the Council hold its next annual meeting at Omaha. By agreement it was decided to defer the discussion relative to the meeting place until the next session of the Board.

A motion was made and duly seconded for adjournment. The motion carried.

[Whereupon the meeting of the Board of Directors was adjourned at eleven thirty o'clock in the evening.]

WEDNESDAY EVENING MEETING, DECEMBER 28

Wednesday evening the Board of Directors of the National Council of Geography Teachers convened at the Parker House, Boston, at ten o'clock with President Whitaker presiding.

First, President Whitaker read a report of the Visual Education Committee, the report having been made by Mr. William Gregory, Chairman of the Committee. The report is as follows:

1. Considerable time has been spent in trying to determine the essential equipment for training teachers of geography. Statistics have been gathered as to the equipment in use in teachers' training institutions in this country.
2. Completion of a list of motion picture films suitable for geographic instruction has been under way. All films to be actually reviewed and used in classes before being listed. This is a slow process but should result in a useful list of geographical pictures.
3. Contact has been made with various committees and organizations that are studying the motion picture as of educational value. Most important contact has been with the May Committee of New York with whom two weeks was spent in New York reviewing films.
4. Several efforts are being made to list and score films. Organizations that are engaged in making such lists have been assisted and in turn they have cooperated with us.
5. Some producers of geographical films have asked for guidance in selection of material and scripts have been criticized.
6. In view of the unfinished business it is most earnestly desired that this work be continued so that such material may be embodied in a complete report.

It was moved and duly seconded that the report be accepted. The motion carried.

President Whitaker next called for a report of the committee appointed last year to make a study of the best procedure for payment of bills. This report, telegraphed by H. H. Russell, Chairman of the committee, follows:

1. The Treasurer's account shall be audited annually by a committee of three members of the Council appointed by the President at the opening annual meeting. The committee shall report at the executive meeting of that year.
2. The depository for Council money shall be confirmed by the Executive Committee.
3. The money of the research fund may be deposited jointly with the other money of the Council, but shall be shown separately in the Treasurer's Book.
4. Any investment or lending of money may be made only with the sanction of the Executive Committee.
5. Each bill for payment by the Treasurer shall be itemized.
6. The Treasurer may pay a bill only on a written order from either the Secretary or the President of the Council.

7. All payments shall be made by check.

A motion was made and duly seconded that the report of Chairman Russell be accepted. The motion carried with the understanding that the procedure now goes into effect.

Mrs. Gilland next brought up for discussion the possibility of holding regional meetings. After the "pros and cons" were heard relative thereto, the discussion drifted to that relating to the activities of the various state councils over the country. Altho no action was taken, it was gleaned from the discussion that the time was not ripe for attempting regional meetings. After discussing thoroly the activities of the various state councils, it was moved that the Board request Miss Esther Anderson, Chairman of the Committee on the Promotion of State Chapters of the Council, to include in her report next year information about the number and vitality of state meetings. This motion was duly seconded and was carried.

It was the consensus of the group that all state chairmen should assume the obligation of reporting state activities directly to Miss Esther Anderson, University of Nebraska.

It was further moved that the Secretary be instructed to attempt to get full reports concerning the activities of the various state councils. This motion was duly seconded and after some discussion was carried. A second motion was made that a double report be sent—one to the Editor of the JOURNAL and one to the Secretary. This motion was duly seconded and after some discussion was carried.

There followed a discussion of the matter of individual board members assuming the task of sending programs to delegates to the N.E.A. By show of hands, each member present agreed to undertake the task of sending programs to the delegates to the N.E.A. from his state. It was moved that each one who wants programs should write personally to Mrs. Gilland and ask her to send them, stating the number wanted. This motion was duly seconded and carried.

The San Francisco meeting of the N.E.A. and the meeting of the World Federation of Educational Associations at Rio de Janeiro were further briefly discussed. It was moved that the Council support the activities of the Educational Relations Committee up to the amount of $30. This motion was duly seconded and carried.

President Whitaker next read a letter from the National Council of the Teachers of English requesting the National Council of Geography Teachers to appoint a delegate to work with them in studying the secondary school curriculum. After some discussion, it was moved that the Board of Directors request the President-elect, Dr. Reeder, to serve as our delegate at the conference, or if it is impossible for him to do so, that he be empowered to appoint someone to represent him. This motion was duly seconded and was carried.

The place of the next meeting was next discussed. It was moved that the President and Secretary be authorized to act in selecting a place of meeting for next year. The motion was duly seconded and carried.

Much discussion followed relative to publicizing the work of the National Council of Geography Teachers, the increase in membership, regional meetings, life memberships, geographic nomenclature, etc. After some discussion it was moved that the President refer the various items to the proper committees. The motion was duly seconded and was carried.

President Whitaker next called upon Miss Norah Zink, Chairman of the Committee for Summarizing and Abstracting Researches in Geographic Education, to answer some of the questions which were asked the previous night at which meeting Miss Zink was absent. Miss Zink reported in some detail just how she had gone about in preparing the report which involved a study of 282 theses. A discussion followed.

A motion was made to adjourn. This motion was duly seconded and was carried.

[Whereupon the meeting was adjourned at eleven forty-five o'clock in the evening.]

EDITORIAL NOTES AND NEWS

The geography section of the New York Society for the Study of Education, David J. Swartz, chairman, sponsors a series of meetings addressed by prominent geographers and educators. Some of these addresses appear in the Society's Yearbook. The Geography Section has launched a bulletin, *The Geography Teacher,* the first volume and number of which is dated Jan. 15, 1939.

Those planning the observance of Pan American Day, April 14, may get appropriate program material without cost from the Pan American Union, Washington, D.C. The material includes playlets, carnival background, pageants, poems, legends, and Latin American music.

Detailed geographical material on the Great Smokies and other parts of the Southern Appalachians has been very limited. Strangely, a manuscript by Arnold Guyot, "Notes on the Geography of the Mountain District of Western North Carolina," from the archives of the U. S. Coast and Geodetic Survey has been recently uncovered and was published in the North Carolina Historical Review, Vol. 15. The Appalachian Trail Conference, Washington, D.C., has secured the rights to circularize Guyot's narrative as Publication No. 10. Guyot was an associate of Louis Agassiz in Switzerland, then taught physical geography at Princeton University, and began in 1849 his explorations of the Appalachian Mountain system, the report of which was submitted, Feb. 22, 1863, to the Director of the Coast Survey. Both manuscript and map reflect pre-Civil War nomenclature. The concluding chapter, Military Importance of that Southern Mountain Region, probably explains why this valuable manuscript was so long unavailable to the public.

A set of ten pictorial conservation charts prepared by the Soil Conservation Service is available free to schools, colleges, teachers, extension workers, etc., on request from the U. S. Department of Agriculture, Washington, D.C., or from the field offices of the Soil Conservation Service. The approximate size of each chart is 19½ by 24½ inches and contains six photographs carefully annotated.

The year 1938 was marked by unusual displays of northern lights, several of unusual extent, especially those of Sept. 27, 1938. Eruptions on the sun hurl electron rays into the universe which, if they come near the earth, are diverted toward the poles by the earth's magnetic field. The ionization of the rarefied gases of the upper atmosphere results in the colored lights. These aurorae produce disturbances in the earth's magnetic field and in radio reception. Studies are being made to find what their relation, if any, is to death rate from heart disease and suicides. One of the greatest research observatories is at Tromso, Norway, where moving pictures have been made of these striking lights.

The old Chesapeake and Ohio Canal has recently been purchased by the Federal Government and will become, at least in part, a national recreational area, providing seasonal boating, fishing, picnic grounds, and skating. The old towpath is to become a hiker's trail. Some of the quaint old taverns which provided meals and lodging for travelers on the Canal are to be restored.

According to Electric Power Statistics 1937, published by the Federal Power Commission, Washington, D.C., 36 per cent of the output of electric energy in the United States was the output of water power.

Many workers in the field of geography are interested in the contribution that it may make to an understanding of and solution of numerous social problems. Workers in the field of social studies are also interested in the contribution that geography may make. Geographers will, therefore, be interested to know that manuscript in the field of geography will receive consideration by Dr. J. H. Rhyne, Norman, Oklahoma, editor of *Southwestern Social Science Quarterly*. No editor, of course, promises an author in advance that he will publish a manuscript, but we are pleased to announce that such manuscript will receive very friendly consideration and we hope that many geographers will avail themselves of this opportunity of submitting suitable manuscript for consideration by Dr. Rhyne.

According to the Bureau of Public Roads, the cost of highway snow removal is probably greatest west of Denver on U.S. 40 where it crosses the Continental Divide three times. One crossing is not high enough to cause a serious snow problem; but the 30 miles of road on Berthoud Pass at an elevation of 11,306 feet costs about $15,000 annually, while the clearing of the 21 miles on Rabbit Ears Pass at 9611 feet costs about $17,000 a year. Snow falls on more than half the days from December thru May, and may total 12 or 13 feet in a month. Trucks equipped with plows can remove eight inches of wet snow at a speed of 25 miles an hour, but dry snow removal is slower in order to safeguard the driver from the blinding flying snow. Each pass has a camp with a foreman, cook, and 9 or 10 operators. Keeping these passes open has facilitated the use of the area for winter sports as well as highway travel, both of which help lengthen the ordinarily short season of the mountain hotels.

The National Park Service of the Department of the Interior is featuring a series of releases dealing with the milestones in the settlement of New Mexico and Arizona since the coming of Coronado in 1540. New Mexico will commemorate this epoch during the summer of 1940. The National Park Service offers a variety of attractions in the nearby National Parks and in the twenty-six areas administered as the Southwestern National Monuments. In this area, where the population density is less than four to the square mile, may be found the essentials of the ancient culture of the Pueblo Indians in contrast with the distinctive Spanish inheritance tenaciously preserved in some of the aristocratic Spanish-Americans whose land grants came directly from the Kings of Spain. This region also boasts the oldest capital city on the continent, and ruins of missions antedating those of California. Of historic lore there is an abundance for the old Southwest has had its full quota of distinguished missionaries, traders, gold seekers, archaeologists, geologists, engineers, adventurers, and famed soldiers under four flags.

DR. JOHN B. APPLETON, formerly of Scripps College, is Assistant Director of the Northwest Regional Council, with headquarters in Portland, Oregon. This Council has a three year's backing from the Rockefeller Foundation.

GEOGRAPHICAL PUBLICATIONS

Godfrey Sykes. **The Colorado Delta.** American Geographical Society Special Publication No. 19, edited by W. L. G. Joerg. 193 pp. Illustrated. Published jointly by Carnegie Institution of Washington and the American Geographical Society of New York. 1937. $4.00.

The disposal of the enormous volume of material excavated in hundreds of miles of canyons in mile high plateaus has been studied by the author over a period of forty-five years. His research covers the history of exploration and navigation of the lower river, its physiographic history, and stream dynamics. Of special interest is the fact that in the late sixties, one company operated a fleet of three stern wheelers of 17-100 tons draft and three barges of similar draft between the Gulf and Yuma, just below the head of the delta. So great were the hazards due to great tides which developed heavy and quickly reversing currents, the indefinite channels, the obstruction shoals and lack of firm banks, the coming of the railroads, and the diversion of the river for irrigation that profitable navigation ceased in about 1877. Many have been the shifts in outlet between land locked seas and the Gulf, the most far reaching, perhaps, the one into Salton Sink, undoubtedly accelerated by attempts to divert the water for irrigation. With the completion of Boulder Dam and of Parker Dam and the diversion of water into the Los Angeles Aqueduct the changes in the regimen of the river will undoubtedly be retarded. An excellent map and bibliography are included.

Macmillan's Modern Dictionary. Compiled and edited under the supervision of Bruce Overton. 1466 pp. The Macmillan Co., N.Y. 1938. $3.00.

A great many new words in current usage are included in this list of more than 100,000 words. There are no appendices. A single alphabetically arranged list features common and proper names, abbreviations, and foreign words and phrases most commonly quoted in speech or print. Pertinent statistical data are included in the geographic entries. To stimulate a wide vocabulary, related words are in close proximity to the entry word, with an enriched inclusion of idiomatic phrases. In compound words current accepted printing practices are followed. Each entry is set in black-face type, divided into syllables by hyphens or accents, followed by the phonetic spelling, abbreviation for the part of speech, definitions, and derivation. There are no illustrations.

Forest Ray Moulton. (Editor.) **The World And Man As Science Sees Them.** 533 pp. Illustrated. The University of Chicago Press, Chicago. 1937. $3.00.

This one-volume text for an introductory college science course has been prepared by thirteen scientists, all present or former members of the University of Chicago faculty. Geography is not included in the chapter headings. The organization is similar to that used in The Nature of the World and of Man.

Alexander Forbes, with contributions by O. M. Miller, N. E. Odell and Ernst C. Abbe. **Northernmost Labrador, Mapped from the Air.** 255 pp. Illustrated; also, a slip case of 6 maps and 25 pp. of Navigational Notes on the Labrador Coast by Alexander Forbes. American Geographical Society Publication No. 22. American Geographical Society, Broadway at 156 St., New York City. 1938. $4.00.

The area mapped from aerial photographs taken in 1931 and supplemented by those

of 1935, together with the ground control, extends from Nachvak Fiord north to Cape Chidley, an area of about 4,000 square miles. Four of the topographic maps are drawn to the scale of 1:100,000, and the other two to the scale of 1:300,000. These maps accompany the publication describing the expeditions. The project was initiated by Dr. Forbes who, tho a Professor of Physiology at the Harvard Medical School, has for years been deeply interested in sailing, aviation, and geography. The surveying operations were in charge of Dr. O. M. Miller, head of the American Geographical Society's Department of Suraeying, who had just devised a new and ingenious method of mapping from high-oblique photographs.

Miles Hadfield. Everyman's **Wild Flowers and Trees.** 184 pp. Illustrated. E. P. Dutton & Company, Inc. New York City. 1938. $2.00

A classified description of five hundred wild plants, shrubs, trees, grasses, and ferns, each illustrated in color taken from Sowerby's British Wild Flowers, or by line drawings of the author.

Charles C. Colby, editor. **Geographic Aspects of International Relations.** (Lectures on the Harris Foundation 1937.) 296 pp. Illustrated. University of Chicago Press, Chicago, Illinois. 1938. $3.00

This volume contains the lectures and round-table papers that were the basis for the discussions at the Thirteenth Institute of the Norman Wait Harris Memorial Foundation. This Symposium is a distinctive contribution to political geography. The papers deal with lands tributary to the Atlantic Basin, developed under these titles: Population Outlets in Overseas Territories by Isaiah Bowman; International Aspects of State Intervention in Economic Life by Pierre Denis; A National Plan and Policy for the Control and Use of Water Resources by Harlan H. Barrows; Reshaping the Map of West Africa by Derwent Whittlesey; A Survey of the Boundary Problems of Europe by Richard Hartshorne; A Distribution of People in South America by Preston E. James; Conflicting Territorial Claims in the Upper Amazon by Robert S. Platt; and Territorial Maps of Nine Nations by Henry M. Leppard. C.P.S.

Harold Rugg. **Changing Countries and Changing Peoples.** 586 pp. Illustrated. Ginn & Co., Boston. 1938. $1.88

Second volume in the revision of the Rugg Social Science series for Junior High. An introduction to world geography with historical backgrounds.

Henry F. Becker and Gladys Fawley. **Laborator Manual and Study Guide in World Geography.** 235 pp. Edwards Brothers, Inc., Ann Arbor, Michigan. 1937. $2.65.

In the *Laboratory Manual and Study Guide in World Geography* by Becker and Fawley, the psychological and pedagogical approach to geographic fundamentals is stressed. They seem to grasp a beginner's difficulties and try to reduce to a minimum the skills needed in understanding and using geographic information from maps, pictures, statistics, graphs, and readings. Analyzing students' needs, and deciding upon necessary learning skills, the authors attempt to correct many beginners' weaknesses by furnishing skills as study units of geographic subject matter under careful supervision. As a result, students not only secure information but they also develop skills and a method of approaching literature so that they can glean geographic facts for themselves.

The Manual is divided into three parts. The first part contains 13 units (4 of which are detailed) on the Geography of North America in which the subject matter is

developed according to the "work region pattern . . . with political regions superimposed."

In the second part of the Manual, South America, Europe, Asia, Africa, and Australia are treated by using political regions and work regions.

The third part contains six appendii on references, climate, soils, agricultural data, water borne commerce of North America and population, production and trade statistics of the continents.

This is distinctly a different kind of manual. It attempts to increase the efficiency of geography teaching. It stresses the importance of this subject matter for future general educational development.

Without sanctioning the Manual in toto (exception is taken to definition of geographic terms, etc.) I believe that the manual should be carefuly examined by all interested in the teaching phase of geography.

THOMAS F. BARTON

State Normal University
Carbondale, Illinois

Ernest Choate. **Student's Assignment Book with Study Aids.** 96 pp. The Circle Book Co., 33 and Arch Sts., Philadelphia. 1938. 20 cents.

Soil conservation practices in the Cotton Belt from the Georgia-Alabama line to central Texas and southern Oklahoma.

E. M. Rowalt. **Soil Defense in the South.** Farmers' Bulletin No. 1809. 64 pp. Illustrated. U. S. Government Printing Office, Washington, D.C. 1938. 10 cents.